

10-522,074 SEQLIST 20050630

SEQUENCE LISTING

<110> Delta Biotechnology Limited  
Darrell Sleep

<120> Gene and Polypeptide Sequences

<130> P30,358 USA

<140> 10/522,074  
<141> 2005-01-20

<150> PCT/GB2003/003273  
<151> 2003-07-23

<150> GB 0217033.0  
<151> 2002-07-23

<160> 40

<170> Seqwin99

<210> 1  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Leader sequence

<220>  
<221> MISC\_FEATURE  
<222> 1  
<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>  
<221> MISC\_FEATURE  
<222> 2  
<223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>  
<221> MISC\_FEATURE  
<222> 3  
<223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>  
<221> MISC\_FEATURE  
<222> 4  
<223> CAN BE EITHER Ser OR Thr

<220>  
<221> MISC\_FEATURE  
<222> 5  
<223> CAN BE EITHER Ile OR Val OR Ala OR Met

<400> 1  
Phe Ile Leu Ser Ile  
1 5

<210> 2  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Leader sequence

<220>

<221> MISC\_FEATURE  
 <222> 2  
 <223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 3  
 <223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 4  
 <223> CAN BE EITHER Ser OR Thr

<220>  
 <221> MISC\_FEATURE  
 <222> 5  
 <223> CAN BE EITHER Ile OR Val OR Ala OR Met

<400> 2  
 Phe Ile Leu Ser Ile  
 1 5

<210> 3  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> 1  
 <223> CAN BE EITHER Phe OR Trp OR Tyr

<220>  
 <221> MISC\_FEATURE  
 <222> 3  
 <223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 4  
 <223> CAN BE EITHER Ser OR Thr

<220>  
 <221> MISC\_FEATURE  
 <222> 5  
 <223> CAN BE EITHER Ile OR Val OR Ala OR Met

<400> 3  
 Phe Ile Leu Ser Ile  
 1 5

<210> 4  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> 1  
 <223> CAN BE EITHER Phe OR Trp OR Tyr

<220>  
 <221> MISC\_FEATURE  
 <222> 2  
 <223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 4  
 <223> CAN BE EITHER Ser OR Thr

<220>  
 <221> MISC\_FEATURE  
 <222> 5  
 <223> CAN BE EITHER Ile OR Val OR Ala OR Met

<400> 4  
 Phe Ile Val Ser Ile  
 1 5

<210> 5  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> 1  
 <223> CAN BE EITHER Phe OR Trp OR Tyr

<220>  
 <221> MISC\_FEATURE  
 <222> 2  
 <223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 3  
 <223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 5  
 <223> CAN BE EITHER Ile Val OR Ala OR Met

<400> 5  
 Phe Ile Leu Ser Ile  
 1 5

<210> 6  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> 1  
 <223> CAN BE EITHER Phe OR Trp OR Tyr

<220>  
 <221> MISC\_FEATURE  
 <222> 2  
 <223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 3  
 <223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 4  
 <223> CAN BE EITHER Ser OR Thr

<400> 6  
 Phe Ile Leu Ser Ile  
 1 5

<210> 7  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<400> 7  
 Phe Ile Val Ser Ile  
 1 5

<210> 8  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<400> 8  
 Met Lys Trp Val  
 1

<210> 9  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<400> 9  
 Leu Phe Leu Phe Ser Ser Ala Tyr Ser  
 1 5

<210> 10  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> 1  
 <223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>  
 <221> MISC\_FEATURE  
 <222> 2  
 <223> CAN BE EITHER Phe OR Trp OR Tyr

```

<220>
<221> MISC_FEATURE
<222> 3
<223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>
<221> MISC_FEATURE
<222> 4
<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>
<221> MISC_FEATURE
<222> 5
<223> CAN BE EITHER Ser OR Thr OR Gly OR Tyr OR Ala

<220>
<221> MISC_FEATURE
<222> 6
<223> CAN BE EITHER Ser OR Thr OR Gly OR Tyr OR Ala

<220>
<221> MISC_FEATURE
<222> 7
<223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>
<221> MISC_FEATURE
<222> 8
<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>
<221> MISC_FEATURE
<222> 9
<223> CAN BE EITHER Ser OR Thr OR Gly OR Tyr OR Ala

<400> 10
Ile Phe Ile Phe Ser Ser Ile Phe Ser
1 5

<210> 11
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Leader sequence

<400> 11
Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Ser Leu Asp Lys Arg
1 5 10 15

<210> 12
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Leader sequence

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> any amino acid PREFERABLY Phe

<220>
<221> MISC_FEATURE
<222> (6)..(6)

```

<223> any amino acid PREFERABLY Ile

<220>

<221> MISC\_FEATURE

<222> (7)..(7)

<223> any amino acid PREFERABLY Val

<220>

<221> MISC\_FEATURE

<222> (8)..(8)

<223> any amino acid PREFERABLY Ser or Thr

<220>

<221> MISC\_FEATURE

<222> (9)..(9)

<223> any amino acid PREFERABLY Ile

<400> 12

Met Lys Trp Val Xaa Xaa Xaa Xaa Xaa Leu Phe Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser

<210> 13

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Leader sequence

<220>

<221> MISC\_FEATURE

<222> (5)..(5)

<223> any amino acid PREFERABLY Phe

<220>

<221> MISC\_FEATURE

<222> (6)..(6)

<223> any amino acid PREFERABLY Ile

<220>

<221> MISC\_FEATURE

<222> (7)..(7)

<223> any amino acid PREFERABLY Val

<220>

<221> MISC\_FEATURE

<222> (8)..(8)

<223> any amino acid PREFERABLY Ser or Thr

<220>

<221> MISC\_FEATURE

<222> (9)..(9)

<223> any amino acid PREFERABLY Ile

<400> 13

Met Lys Trp Val Xaa Xaa Xaa Xaa Xaa Ile Phe Ile Phe Ser Ser Ile  
1 5 10 15

Phe Ser

<210> 14

<211> 24

<212> PRT

<213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> (5)..(5)  
 <223> any amino acid PREFERABLY Phe

<220>  
 <221> MISC\_FEATURE  
 <222> (6)..(6)  
 <223> any amino acid PREFERABLY Ile

<220>  
 <221> MISC\_FEATURE  
 <222> (7)..(7)  
 <223> any amino acid PREFERABLY Val

<220>  
 <221> MISC\_FEATURE  
 <222> (8)..(8)  
 <223> any amino acid PREFERABLY Ser or Thr

<220>  
 <221> MISC\_FEATURE  
 <222> (9)..(9)  
 <223> any amino acid PREFERABLY Ile

<400> 14  
 Met Lys Trp Val Xaa Xaa Xaa Xaa Xaa Leu Phe Leu Phe Ser Ser Ala  
 1 5 10 15  
 Tyr Ser Arg Ser Leu Asp Lys Arg  
 20

<210> 15  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence

<220>  
 <221> MISC\_FEATURE  
 <222> 1 .. 3  
 <223> CAN BE EITHER tty OR tgg OR tay

<220>  
 <221> MISC\_FEATURE  
 <222> 4 .. 6  
 <223> CAN BE EITHER ath OR ttr OR ctn OR gtn OR gcn OR atg

<220>  
 <221> MISC\_FEATURE  
 <222> 7 .. 9  
 <223> CAN BE EITHER ttr OR ctn OR gtn OR gcn OR atg

<220>  
 <221> MISC\_FEATURE  
 <222> 10 .. 12  
 <223> CAN BE EITHER agy OR tcn OR acn

<220>  
 <221> MISC\_FEATURE  
 <222> 13 .. 15  
 <223> CAN BE EITHER ath OR ctn OR gtn OR gcn OR atg

<400> 15	
ttyathtttc tnagyath	18
<210> 16	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Leader sequence	
<220>	
<221> MISC_FEATURE	
<222> 10 .. 12	
<223> CAN BE EITHER tcn OR agy	
<400> 16	
ttyathgtnt cnath	15
<210> 17	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Leader sequence	
<220>	
<221> MISC_FEATURE	
<222> 1 .. 3	
<223> CAN BE EITHER ttc OR tgg OR tac	
<220>	
<221> MISC_FEATURE	
<222> 4 .. 6	
<223> CAN BE EITHER aty OR ttg OR gty OR gct OR atg	
<220>	
<221> MISC_FEATURE	
<222> 7 .. 9	
<223> CAN BE EITHER ttg OR gty OR gct OR atg	
<220>	
<221> MISC_FEATURE	
<222> 10 .. 12	
<223> CAN BE EITHER tcy OR acy	
<220>	
<221> MISC_FEATURE	
<222> 11 .. 15	
<223> CAN BE EITHER aty OR gty OR gct OR atg	
<400> 17	
ttcatyttgt cyaty	15
<210> 18	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Leader Sequence	
<400> 18	
ttcatygyt cyaty	15



## 10-522,074 SEQLIST 20050630

<210> 19  
 <211> 1865  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> *S. cerevisiae* 5'UTR and leader sequence and mature human albumin CDS

<400> 19  
 aagcttaacc taattctaac aagcaaagat gaagtgggtt ttcacgtctt ccattttggt 60  
 ctgtgtctcc tctgcttact ctgatctttt ggataagaga gacgctcaca agtccgaagt 120  
 cgctcacaga ttcaaggact tgggtgaaga aaacttcaag gctttgggtt tgatcgcttt 180  
 cgctcaatac ttgcaacaat gtccattcga agatcacgtc aagttgggtc acgaagttac 240  
 cgaattcgct aagacttggt ttgctgacga atctgttgaa aactgtgaca agtccttgca 300  
 caccttggtt ggtgataagt tgtgtactgt tgctaccitg agagaaacct acggtgaaat 360  
 ggctgactgt tgtgctaagc aagaaccaga aagaaacgaa tgtttcttgc aacacaagga 420  
 cgacaaccca aacttgccaa gattgggttag accagaagt gacgtcatgt gtactgcttt 480  
 ccacgacaac gaagaaacct tcttgaagaa gtacttgtag gaaattgcta gaagacaccc 540  
 atacttctac gcttcagaat tgttggcttt cgtaagaga agctgacttg gcttaaggctg ctttcaccga 600  
 atgttgctaa gctgctgata aggtgtgctt tttgttgcca aagttggatg aattgagaga 660  
 cgaaggtaag gcttcttccg ctaagcaaag attgaagtgt gcttccttgc aaaagttcgg 720  
 tgaaagagct ttcaaggctt gggctgtcgc tagattgtct caaagattcc caaaggctga 780  
 attcgctgaa gtttctaagt tggttactga cttgactaag gttcacactg aatgttgtca 840  
 cgggtgacttg ttggaatgtg ctgatgacag agctgacttg gctaagtaca tctgtgaaaa 900  
 ccaagactct atctcttcca agttgaagga atgttgtgaa aagccattgt tggaaaagtc 960  
 tcaactgtatt gctgaagtgt aaaacgatga aatgccagct gacttgccat ctttggctgc 1020  
 tgacttcggt gaacttaagg acgtttgtaa gaactacgct gaagctaagg acgtcttctt 1080  
 gggatgttct ttgtacgaat acgctagaag acaccagac tactccgttg tcttgttgtt 1140  
 gagattggct aagacctacg aaactacctt ggaaaagtgt tgtgctgctg ctgaccaca 1200  
 cgaatgttac gctaagggtt tcgatgaatt caagccattg gtcgaagaac cacaaaactt 1260  
 gatcaagcaa aactgtgaat tgttcgaaca attgggtgaa tacaagttcc aaaacgcttt 1320  
 gttgggttaga tacactaaga aggtcccaca agtctccacc ccaactttgg ttgaagtctc 1380  
 tagaaacttg ggttaaggctg gttctaagtg ttgtaagcac ccagaagcta agagaatgcc 1440  
 atgtgctgaa gattacttgt ccgtcgcttt gaaccaattg tgtgttttgc acgaaaagac 1500  
 cccagctctt gatagagtca ccaagtgttg tactgaatct ttggttaaca gaagaccatg 1560  
 tttctctgct ttggaagtgc acgaaactta cgttccaaag gaattcaacg ctgaaacttt 1620  
 caccttccac gctgatattc gtaccttgct cgaaaaggaa agacaaatta agaagcaaac 1680  
 tgttttgggt gaattgttca agcacaagcc aaaggctact aaggaacaat tgaaggctgt 1740  
 catggatgat ttcgctgctt tcgttgaaaa gtgttgtaag gctgatgata aggaaacttg 1800  
 tttcgctgaa gaaggtaaga agttggctgc tgcttcccaa gctgctttgg gtttgtaata 1860  
 agctt 1865

<210> 20  
 <211> 1773  
 <212> DNA  
 <213> Artificial Sequence.

<220>  
 <223> A mature human albumin coding region

<400> 20  
 agatcttttg ataagagaga cgctcacaa tccgaagtcg ctacacagatt caaggacttg 60  
 ggtgaagaaa acttcaaggc tttggctctt atcgctttcg ctcaatactt gcaacaatgt 120  
 ccattcgaag atcacgtcaa gttgggtcaac gaagttaccg aattcgctaa gacttgtgtt 180  
 gctgacgaat ctgtgaaaa ctgtgacaag tccttgacac ccttgttcgg tgataagttg 240  
 tgtactgttg ctaccttgag agaaacctac ggtgaaatgg ctgactgttg tgctaagcaa 300  
 gaaccagaaa gaaacgaatg tttcttgcaa cacaaggacg acaacccaaa cttgccaaaga 360  
 ttgggttagac cagaagtgtg cgtcatgtgt actgctttcc acgacaacga agaaaccttc 420  
 ttgaagaagt acttgtaga aattgctaga agacacccat acttctacgc tccagaattg 480  
 ttgttcttcg ctaagagata caaggctgct ttaccgaaat gttgtcaagc tgctgataag 540  
 gctgcttgtt tgttgccaaa gttggatgaa ttgagagacg aaggtaaggc ttcttccgct 600  
 aagcaaagat tgaagtgtgc ttccttgcaa aagttcgggt aaagagctt caaggcttgg 660  
 gctgtcgcta gattgtctca aagattccca aaggctgaat tcgctgaagt ttctaagttg 720  
 gttactgact tgactaaggc tcacactgaa tgttgtagc gtgacttgtt ggaatgtgct 780  
 gatgacagag ctgacttggc taagtacatc tgtgtaaac aagactctat ctcttccaa 840  
 ttgaaggaaat gttgtgaaaa gccattgttg gaaaagtctc actgtattgc tgaagttgaa 900  
 aacgatgaaa tgccagctga cttgccatct ttggctgctg acttcgttga atctaaggac 960  
 gtttgtaaga actacgctga agctaaggac gtcttcttgg gtatgttctt gtacgaatac 1020

## 10-522,074 SEQLIST 20050630

gctagaagac	acccagacta	ctccgttgtc	ttgttggtga	gattggctaa	gacctacgaa	1080
actaccttgg	aaaagtgttg	tgctgctgct	gacccacacg	aatgttacgc	taagggtttc	1140
gatgaattca	agccattggg	cgaagaacca	caaaacttga	tcaagcaaaa	ctgtgaattg	1200
ttcgaacaat	tgggtgaata	caagttccaa	aacgctttgt	tggttagata	cactaagaag	1260
gtcccacaag	tctccacccc	aactttgggt	gaagtctcta	gaaacttggg	taagggtcgg	1320
tctaagtgtt	gtaagcacc	agaagctaa	agaatgccat	gtgctgaaga	ttacttgtcc	1380
gtcgttttga	accaattgtg	tgttttgcac	gaaaagaccc	cagtctctga	tagagtcacc	1440
aagtgttgta	ctgaatcttt	ggttaacaga	agaccatggt	tctctgcttt	ggaagtcgac	1500
gaaacttacg	ttccaaagga	attcaacgct	gaaactttca	ccttccacgc	tgatatctgt	1560
accttgtccg	aaaaggaaa	acaaattaa	aagcaaactg	ctttgggtga	attgggtcaag	1620
cacaagccaa	aggctactaa	ggaacaattg	aaggctgtca	tggatgattt	cgctgctttc	1680
gttgaaaagt	gttgtaaggc	tgatgataag	gaaacttggt	tcgctgaaga	aggtaagaag	1740
ttggctcgctg	cttcccaagc	tgctttgggt	ttg			1773

<210> 21  
 <211> 1827  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence and protein

<400>	21					
atgaagtggg	ttttcatcgt	ctccattttg	ttcttgttct	cctctgctta	ctctagatct	60
ttggataaga	gagacgctca	caagtcgaa	gtcgtcaca	gattcaagga	cttgggtgaa	120
gaaaacttca	aggctttggg	cttgatcgct	ttcgtcaaat	acttgcaaca	atgtccattc	180
gaagatcacg	tcaagtggg	caacgaagt	accgaattcg	ctaagacttg	tggtgctgac	240
gaatctgctg	aaaactgtga	caagtccttg	cacaccttgt	tcggtgataa	gttgtgtact	300
gttgctacct	tgagagaaac	ctacggtgaa	atggctgact	gttggtgctaa	gcaagaacca	360
gaaagaaacg	aatgtttctt	gcaacacaag	gacgacaacc	caaacttgcc	aagattgggt	420
agaccagaag	ttgacgtcat	gtgtactgct	ttccacgaca	acgaagaaac	cttcttgaag	480
aagtacttgt	acgaaattgc	tagaagacac	ccatacttct	acgctccaga	attgttgttc	540
ttcgctaaga	gatacaaggc	tgctttcacc	gaatgttctc	aagctgctga	taaggctgct	600
tgtttgttgc	caaagtggga	tgaattgaga	gacgaaggta	aggcttcttc	cgctaagcaa	660
agattgaagt	gtgcttcctt	gcaaaagttc	gggtgaaagag	ctttcaaggc	ttgggctgtc	720
gctagattgt	ctcaaagatt	cccaaaggct	gaattcgctg	aagtttctaa	gttgggtact	780
gacttgacta	aggttcacac	tgaatgttgt	cacggtgact	tggtggaatg	tgctgatgac	840
agagctgact	tggctaagta	catctgtgaa	aaccaagact	ctatctcttc	caagttgaag	900
gaatgttgtg	aaaagccatt	gttggaagag	tctcactgta	ttgctgaagt	tgaaaacgat	960
gaaatgccag	ctgacttgcc	atctttggct	gctgacttgc	ttgaatctaa	ggacgtttgt	1020
agaactacg	ctgaagctaa	ggacgtcttc	ttgggtatgt	tcttgtacga	atacgctaga	1080
agacaccag	actactccgt	tgctttgttg	ttgagattgg	ctaagacctc	cgaaactacc	1140
ttggaaaagt	gttgtgctgc	tgctgaccca	cacgaatgtt	acgctaagg	tttcgatgaa	1200
ttcaagccat	tggtcgaaga	accacaaaac	ttgatcaagc	aaaactgtga	attgttcgaa	1260
caattgggtg	aatacaagtt	ccaaaacgct	ttgttgggtt	gatacactaa	gaagggtcca	1320
caagtctcca	ccccactttt	ggttgaagtc	tctagaagct	tgggtgaagg	cggttctaa	1380
tggttgaagc	acccagaagc	taagagaatg	ccatgtgctg	aagattactt	gtccgtcggt	1440
ttgaaccaat	tgtgtgtttt	gcacgaaaag	acccagctct	ctgatagagt	caccaagtgt	1500
tgtactgaat	ctttgggttaa	cagaagacca	tgtttctctg	ctttggaagt	cgacgaaact	1560
tccgttccaa	aggaattcaa	cgctgaaact	ttcaccttcc	acgctgatat	ctgtaccttg	1620
tccgaaaagg	aaagacaaat	taagaagcaa	actgctttgg	ttgaattggg	caagcacaag	1680
ccaaaggcta	ctaaggaaca	attgaaggct	gtcatggatg	atttcgctgc	tttcgttgaa	1740
aagtgttgta	aggctgatga	taaggaaact	tgtttcgctg	aagaaggtaa	gaagttgggtc	1800
gctgcttccc	aagctgcttt	gggtttg				1827

<210> 22  
 <211> 1827  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Leader sequence and the mature human albumin coding region

<400>	22					
atgaagtggg	taagctttat	ttcccttctt	tttctcttta	gctcggctta	ttccaggagc	60
ttggataaaa	gagatgcaca	caagagtggg	gttgcctatc	ggtttaaaga	tttgggagaa	120
gaaaatttca	aagccttggg	gttgattgcc	tttgctcagt	atcttcagca	gtgtccattt	180
gaagatcatg	taaaattagt	gaatgaagta	actgaatttg	caaaaacatg	tgttgctgat	240

10-522,074 SEQLIST 20050630

gagtcagctg	aaaattgtga	caaatacatt	catacccttt	ttggagacaa	attatgcaca	300
gttgcaactc	ttcgtgaaac	ctatggtgaa	atggctgact	gctgtgcaaa	acaagaacct	360
gagagaaatg	aatgcttctt	gcaacacaaa	gatgacaacc	caaacctccc	ccgattgggtg	420
agaccagagg	ttgatgtgat	gtgcactgct	tttcatgaca	atgaagagac	atTTTTgaaa	480
aaatacttat	atgaaattgc	cagaagacat	ccttactttt	atgccccgga	actccttttc	540
tttgctaaaa	ggtataaagc	tgcttttaca	gaatgttgcc	aagctgctga	taaagctgcc	600
tgctgtttgc	caaagctcga	tgaacttcgg	gatgaaggga	aggcttcgtc	tgccaaacag	660
agactcaagt	gtgccagctc	ccaaaaattt	ggagaaaagag	ctttcaaagc	atgggcagta	720
gctcgctga	gccagagatt	tcccaaagct	gagtttgca	aagtttccaa	gttagtgaca	780
gatcttacca	aagtccacac	ggaatgctgc	catggagatc	tgcttgaatg	tgctgatgac	840
agggcggacc	ttgccaagta	tatctgtgaa	aatcaagatt	cgatctccag	taaactgaag	900
gaatgctgtg	aaaaacctct	gttggaaaaa	tcccaactga	ttgccgaagt	ggaaaatgat	960
gagatgcctg	ctgacttgcc	ttcattagct	gctgattttg	ttgaaagtaa	ggatgtttgc	1020
aaaaactatg	ctgaggcaaa	ggatgtcttc	ctgggcatgt	ttttgtatga	atatgcaaga	1080
aggcatcctg	attactctgt	cgctgctgct	ctgagacttg	ccaagacata	tgaaaccact	1140
ctagagaagt	gctgtgccgc	tgcatatcct	catgaatgct	atgccaaagt	gttcgatgaa	1200
tttaaacctc	ttgtggaaga	gcctcagaat	ttaatcaaac	aaaattgtga	gctttttgag	1260
cagctttggag	agtacaaatt	ccagaatgcg	ctattagttc	gttacaccaa	gaaagtacct	1320
caagtgtcaa	ctccaactct	tgtagaggtc	tcaagaaacc	taggaaaagt	gggcagcaaa	1380
tgttgtaaac	atcctgaagc	aaaaagaatg	ccctgtgcag	aagactatct	atccgtgggtc	1440
ctgaaccagt	tatgtgtgtt	gcatgagaaa	acgccagtaa	gtgacagagt	caccaaattgc	1500
tgacacagaat	ccttggtgaa	caggcgacca	tgcttttcag	ctctggaagt	cgatgaaaca	1560
tacgttccca	aagagttaa	tgctgaaaca	ttcaccttcc	atgcagatat	atgcacactt	1620
tctgagaagg	agagacaaat	caagaaacaa	actgcacttg	ttgagctcgt	gaaacacaag	1680
cccaaggcaa	caaaagagca	actgaaagct	gttatggatg	atttcgcagc	ttttgtagag	1740
aagtgtgtca	aggctgacga	taaggagacc	tgctttgccg	aggagggtaa	aaaacttggt	1800
gctgcaagtc	aagctgcctt	aggctta				1827

<210> 23  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Oligonucleotide primer

<400> 23  
 ctaaagagaa aaagaatgga gacgatgaat acccacttca tctttgac 47

<210> 24  
 <211> 72  
 <212> DNA  
 <213> Leader Sequence

<400> 24  
 atgaagtggg tattcatcgt ctccattctt tttctcttta gctcggctta ttccaggagc 60  
 ttggataaaa ga 72

<210> 25  
 <211> 1827  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Leader Sequence

<400>	25					
atgaagtggg	tattcatcgt	ctccattctt	tttctcttta	gctcggctta	ttccaggagc	60
ttggataaaa	gagatgcaca	caagagtga	gttgctcatc	ggtttaaaga	tttgggagaa	120
gaaaatttca	aagccttggt	gttgattgcc	tttgctcagt	atcttcagca	gtgtccattt	180
gaagatcatg	taaaattagt	gaatgaagta	actgaatttg	caaaaacatg	tgttgctgat	240
gagtcagctg	aaaattgtga	caaatacatt	catacccttt	ttggagacaa	attatgcaca	300
gttgcaactc	ttcgtgaaac	ctatggtgaa	atggctgact	gctgtgcaaa	acaagaacct	360
gagagaaatg	aatgcttctt	gcaacacaaa	gatgacaacc	caaacctccc	ccgattgggtg	420
agaccagagg	ttgatgtgat	gtgcactgct	tttcatgaca	atgaagagac	atTTTTgaaa	480
aaatacttat	atgaaattgc	cagaagacat	ccttactttt	atgccccgga	actccttttc	540
tttgctaaaa	ggtataaagc	tgcttttaca	gaatgttgcc	aagctgctga	taaagctgcc	600
tgctgtttgc	caaagctcga	tgaacttcgg	gatgaaggga	aggcttcgtc	tgccaaacag	660

10-522,074 SEQLIST 20050630

agactcaagt	gtgccagtct	ccaaaaattt	ggagaaagag	ctttcaaagc	atgggcagta	720
gctcgctga	gccagagatt	tcccaaagct	gagtttgag	aagtttccaa	gttagtgaca	780
gatcttacca	aagtccacac	ggaatgctgc	catggagatc	tgcttgaatg	tgctgatgac	840
agggcggacc	ttgccaaagta	tatctgtgaa	aatcaagatt	cgatctccag	taaactgaag	900
gaatgctgtg	aaaaacctct	gttggaaaaa	tcccactgca	ttgccgaagt	ggaaaatgat	960
gagatgcctg	ctgacttgcc	ttcattagct	gctgattttg	ttgaaagtaa	ggatgtttgc	1020
aaaaactatg	ctgaggcaaa	ggatgtcttc	ctgggcatgt	ttttgtatga	atatgcaaga	1080
aggcatcctg	attactctgt	cgtgctgctg	ctgagacttg	ccaagacata	tgaaaccact	1140
ctagagaagt	gctgtgcccgc	tgcagatcct	catgaatgct	atgccaaagt	gttcgatgaa	1200
tttaaacctc	ttgtggaaga	gcctcagaat	ttaatcaaac	aaaattgtga	gctttttgag	1260
cagcttggag	agtacaaatt	ccagaatgcg	ctattagttc	gttacaccaa	gaaagtaccc	1320
caagtgtcaa	ctccaactct	tgtagaggtc	tcaagaaacc	taggaaaagt	gggcagcaaa	1380
tgttgtaaac	atcctgaagc	aaaaagaatg	ccctgtgcag	aagactatct	atccgtggtc	1440
ctgaaccagt	tatgtgtggt	gcatgagaaa	acgccagtaa	gtgacagagt	caccaaatac	1500
tgcacagaat	ccttggtgaa	caggcgacca	tgcttttcag	ctctggaagt	cgatgaaaca	1560
tacgttccca	aagagtttaa	tgctgaaaca	ttcaccttcc	atgcagatat	atgcacactt	1620
tctgagaagg	agagacaaat	caagaaacaa	actgcacttg	ttgagctcgt	gaaacacaag	1680
cccaaggcaa	caaaagagca	actgaaagct	gttatggatg	atttcgcagc	ttttgtagag	1740
aagtgtgca	aggctgacga	taaggagacc	tgctttgccg	aggagggtaa	aaaacttggt	1800
gctgcaagtc	aagctgcctt	aggctta				1827

<210> 26  
 <211> 1827  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Plasmid

<400>	26					
atgaagtggg	tttctttcat	ttccttggtg	ttcttggtct	cctctgctta	ctctagatct	60
ttggataaga	gagacgctca	caagtcggaa	gtcgcctcaca	gattcaagga	cttgggtgaa	120
gaaacattca	aggctttggt	cttgatcgct	ttcgcctaat	acttgcaaca	atgtccattc	180
gaagatcacg	tcaagtgggt	caacgaagtt	accgaattcg	ctaagacttg	tggtgtgac	240
gaatctgctg	aaaactgtga	caagtccttg	cacaccttgt	tcggtgataa	gttgtgtact	300
gttgctacct	tgagagaaac	ctacggtgaa	atggctgact	gttgtgctaa	gcaagaacca	360
gaaagaaacg	aatgtttctt	gcaacacaag	gacgacaacc	caaacttgcc	aagattgggt	420
agaccagaag	ttgacgtcat	gtgtactgct	ttccacgaca	acgaagaaac	cttcttgaag	480
aagtacttgt	acgaaattgc	tagaagacac	ccatacttct	acgctccaga	attgttggtc	540
ttcgctaaga	gatacaaggc	tgctttcacc	gaatgttgct	aagctgctga	taaggctgct	600
tgtttggttg	caaagtgtga	tgaattgaga	gacgaaggta	aggcttcttc	cgctaagcaa	660
agattgaagt	gtgcttccct	gcaaaagttc	ggtgaaagag	ctttcaaggc	ttgggctgtc	720
gctagattgt	ctcaaagatt	cccaaaggct	gaatttcgctg	aagtttctaa	gttggttact	780
gacttgacta	aggttcacac	tgaatgttgt	cacggtgact	tggttgaatg	tgctgatgac	840
agagctgact	tggctaagta	catctgtgaa	aaccaagact	ctatctcttc	caagttgaag	900
gaatgttgtg	aaaagccatt	gttggaaaaag	tctcactgta	ttgctgaagt	tgaaaacgat	960
gaaatgccag	ctgacttgcc	atctttggct	gctgacttcg	ttgaatctaa	ggacgtttgt	1020
agaactacg	ctgaagctaa	ggacgtcttc	ttgggtatgt	tcttgtagca	atacgctaga	1080
agacacccag	actactccgt	tgctttgttg	ttgagattgg	ctaagaccta	cgaaactacc	1140
ttggaaaagt	gttgtgctgc	tgctgaccca	cacgaatgtt	acgctaaggt	tttcgatgaa	1200
ttcaaggcat	tggctgaaga	accacaaaac	ttgatataagc	aaaactgtga	attgttcgaa	1260
caattgggtg	aatacaagtt	ccaaaacgct	ttgttgggtta	gatacactaa	gaaggtccca	1320
caagtctcca	ccccaacttt	ggttgaagtc	tctagaaact	tgggttaaggt	cggttctaag	1380
tgttgtaagc	acccagaagc	taagagaatg	ccatgtgctg	aagattactt	gtccgtcggt	1440
ttgaaccaat	tgtgtgtttt	gcacgaaaag	acccagctct	ctgatatagt	caccaagtgt	1500
tgtactgaat	ctttggttaa	cagaagacca	tgtttctctg	ctttggaagt	cgacgaaact	1560
tacgttccaa	aggaattcaa	cgctgaaact	ttcaccttcc	acgctgatat	ctgtaccttg	1620
tccgaaaagg	aaagacaaat	taagaagcaa	actgctttgg	ttgaattgggt	caagcacaag	1680
ccaaaggcta	ctaaggaaca	attgaaggct	gtcatggatg	atttcgctgc	tttcgttgaa	1740
aagtgttgta	aggctgatga	taaggaaact	tgtttcgctg	aagaaggtaa	gaagttgggtc	1800
gctgcttccc	aagctgcttt	gggtttg				1827

<210> 27  
 <211> 72  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Leader sequence

<400> 27  
atgaagtggg ttttcatcgt ctccattttg ttcttggtct cctctgctta ctctagatct 60  
ttggataaga ga 72

<210> 28

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion pre-sequence

<400> 28

Met Lys Trp val val Ser Ser Ser Ala Tyr Ser  
1 5 10

<210> 29

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Leader Sequence

<220>

<221> MISC\_FEATURE

<222> 1

<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>

<221> MISC\_FEATURE

<222> 2

<223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met

<220>

<221> MISC\_FEATURE

<222> 3

<223> CAN BE EITHER Leu OR Val OR Ala OR Met

<220>

<221> MISC\_FEATURE

<222> 5

<223> CAN BE EITHER Ile OR Val OR Ala OR Met

<400> 29

Phe Ile Leu Thr Ile  
1 5

<210> 30

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Secretion pre-sequence

<400> 30

Leu Phe Leu Phe Ser Ser Ala Tyr Ser Arg Gly Val Phe Arg Arg  
1 5 10 15

<210> 31

<211> 24

<212> PRT

<213> Artificial Sequence

<220>  
<223> Leader Sequence

<220>  
<221> MISC\_FEATURE  
<222> (5)..(5)  
<223> any amino acid PREFERABLY Phe

<220>  
<221> MISC\_FEATURE  
<222> (6)..(6)  
<223> any amino acid PREFERABLY Ile

<220>  
<221> MISC\_FEATURE  
<222> (7)..(7)  
<223> any amino acid PREFERABLY Val

<220>  
<221> MISC\_FEATURE  
<222> (8)..(8)  
<223> any amino acid PREFERABLY Ser or Thr

<220>  
<221> MISC\_FEATURE  
<222> (9)..(9)  
<223> any amino acid PREFERABLY Ile

<400> 31  
Met Lys Trp Val Xaa Xaa Xaa Xaa Xaa Leu Phe Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg  
20

<210> 32  
<211> 24  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Secretion pre-pro sequence

<400> 32  
Met Lys Trp Val Phe Ile Val Ser Ile Leu Phe Leu Phe Ser Ser Ala  
1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg  
20

<210> 33  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Leader Sequence

<220>  
<221> MISC\_FEATURE  
<222> 2  
<223> CAN BE EITHER Lys OR Arg OR His

<220>  
<221> MISC\_FEATURE  
<222> 3  
<223> CAN BE EITHER Phe OR Trp OR Tyr

<220>  
 <221> MISC\_FEATURE  
 <222> 4  
 <223> CAN BE EITHER Ile OR Leu OR Val OR Ala OR Met  
  
 <400> 33  
 Met Lys Phe Ile  
 1  
  
 <210> 34  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Leader Sequence  
  
 <400> 34  
 ttcacgtct ccatt 15  
  
 <210> 35  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Oligonucleotide primer  
  
 <400> 35  
 gcatgcggcc gccgtaatg cggtatcgtg aaagcg 36  
  
 <210> 36  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Oligonucleotide primer  
  
 <400> 36  
 gcataagctt acccacttca tctttgcttg tttag 35  
  
 <210> 37  
 <211> 11  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Oligonucleotide linker  
  
 <400> 37  
 ttaggcttat a 11  
  
 <210> 38  
 <211> 12  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Oligonucleotide linker  
  
 <400> 38  
 ccgaatattc ga 12  
  
 <210> 39  
 <211> 40  
 <212> DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Oligonucleotide primer

&lt;400&gt; 39

gttagaatta ggttaagctt gtttttttat tggcgatgaa

40

&lt;210&gt; 40

&lt;211&gt; 1865

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Plasmid

&lt;400&gt; 40

aagcttaacc	taattctaac	aagcaaagat	gaagtgggtt	tctttcattt	ccttgttggt	60
cttgttctcc	tctgcttact	ctagatcttt	ggataagaga	gacgctcaca	agtccgaagt	120
cgctcacaga	ttcaaggact	tgggtgaaga	aaacttcaag	gctttggtct	tgatcgcttt	180
cgctcaatac	ttgcaacaat	gtccattcga	agatcacgct	aagttggtca	acgaagttac	240
cgaattcgct	aagacttggt	ttgctgacga	atctgctgaa	aactgtgaca	agtccttgca	300
caccttggtc	ggtgataagt	tgtgtactgt	tgctaccttg	agagaaaacct	acggtgaaat	360
ggctgactgt	tgtgctaagc	aagaaccaga	aagaaacgaa	tgtttcttgc	aacacaagga	420
cgacaaccca	aacttgccaa	gattggttag	accagaagtt	gacgtcatgt	gtactgcttt	480
ccacgacaac	gaagaaacct	tcttgaagaa	gtacttgta	gaaattgcta	gaagacaccc	540
atacttctac	gctccagaat	tgttgttctt	cgctaagaga	tacaaggctg	ctttcaccga	600
atggtgtcaa	gctgctgata	aggctgcttg	tttggtgcca	aagttggatg	aattgagaga	660
cgaaggtaag	gcttcttccg	ctaagcaaag	attgaagtgt	gcttccttgc	aaaagttcgg	720
tgaagagctt	ttcaaggctt	gggctgtcgc	tagattgtct	caaagattcc	caaaggctga	780
attcgctgaa	gtttctaagt	tggttactga	cttgactaag	gttcacactg	aatggtgtca	840
cggtgacttg	ttggaatgtg	ctgatgacag	agctgacttg	gctaagtaca	tctgtgaaaa	900
ccaagactct	atctcttcca	agttgaagga	atgttgtaaa	aagccattgt	tggaaaagtc	960
tcactgtatt	gctgaagttg	aaaacgatga	aatgccagct	gacttgccat	ctttggctgc	1020
tgacttcggt	gaatctaagg	acgtttgtaa	gaactacgct	gaagctaagg	acgtcttctt	1080
gggtatgttc	ttgtacgaat	acgctagaag	acacccagac	tactccgttg	tcttggtggt	1140
gagattggct	aagacctacg	aaactacctt	ggaaaagtgt	tgtgctgctg	ctgaccaca	1200
cgaatgttac	gctaagggtt	tcgatgaatt	caagccattg	gtcgaagaac	cacaaaactt	1260
gatcaagcaa	aactgtgaat	tgttcgaaca	attgggtgaa	tacaagttcc	aaaacgcttt	1320
gttggttaga	tacactaaga	aggtcccaca	agtcctccacc	ccaactttgg	ttgaagtctc	1380
tagaaacttg	ggttaaggctg	gttctaagtg	ttgtaagcac	ccagaagcta	agagaatgcc	1440
atgtgctgaa	gattacttgt	ccgtcgtttt	gaaccaattg	tgtgttttgc	acgaaaagac	1500
cccagtcctc	gatagagtca	ccaagtgttg	tactgaatct	ttggtttaaca	gaagaccatg	1560
tttctctgct	ttggaagtcg	acgaaactta	cgttccaaag	gaattcaacg	ctgaaacttt	1620
caccttccac	gctgatatct	gtaccttgct	cgaaaaggaa	agacaaatta	agaagcaaac	1680
tgcttttggt	gaattggtca	agcacaagcc	aaaggctact	aaggaacaat	tgaaggctgt	1740
catggatgat	ttcgctgctt	tcgttgaaaa	gtgttgtaag	gctgatgata	aggaaacttg	1800
tttcgctgaa	gaaggtaaga	agttggtcgc	tgcttcccaa	gctgcttttg	gtttgtaata	1860
agctt						1865